

Project: [REDACTED]

Notebook Number: _____

Mixing Pt Bath

2nd Pt Remo

For 4 Ltrs

Add $4 \times 15 \text{ grams KOH} = 60 \text{ gr KOH}$ Add $4 \times 19.5 = 78 \text{ grams Pt A salt}$

Mixed 18 Liters

pH \approx ~~11.97~~ 11.951st Run old water 1.88 Amps DC \rightarrow 7.2 \pm @ 25°C

2nd Run w 200 Å seed layer #05

Exceeded 9.9 \pm only reached 1.6 Å

Aborted Run

Readjusted Head to fully touch solution

For water #04 200 Å seed

initial resistance for High

@ 9.9 \pm only \approx 1.6 ÅAs Pt deposited resistance \downarrow and \pm \downarrow At end of Run \approx 8.4 \pm

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2/10

Project:

PT N. Kuo

Notebook Number:

Diffuser at 15 mm

changing to

Changed recipe to 2 step

Low Current 1.4 A for 1 A-min

Plate 1.55 A for 4.93 A-min

10:35 AM Pump 59% @ 5.0 GPM

Trial

Run A ← water 03 200 A° 25°C

5.93 A-MIN @ 1.88 A (1.4 A per plate for 1 A-min)

Total water plates ≈ 7

Uniformity $\approx 10\%$

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Notebook Number: _____

Run # 1 200 Å seed T₂N 5.3 mA/cm²
water # 6

Voltage P₁ seed = 6.3 25°C

V_{plate} = 7.26 5 GPM

Small amount of cracking near fingers

Diffusion spacing @ 10 mm

Run # 2 water 01 600 Å ~~T₂N~~ T₂N 25°C
Current at 2 A = mA/cm² 5 GPM

V_{pre} = 5.5

V_{plate} 7.13

Total water plated = 9

13:40 HRS Added 550 mls H₂O

pH = 11.72

pump speed > 60%

Run # 3 water # 10 Seed = 600 Å T₂O₂

V_{pre} 7.12

V_{plate} = 8.60

Peeling on Edge

Poor Adhesion

2 Amps

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Run # 8 wafer # 21 200 Å seed Ta N Bar

Recipe - PT-5 25°C

 $V_{pre} = 8.03$ $V_{plate} = 8.29$

Peel at @ edges

Run # 9 wafer 24 600 Å seed Ta N

Recipe 7 T = 25

 $V_{pre} =$ $V_{plate} = 8.2$

Peel at @ Edges

Run # 10 wafer 02 600 Å T.N

Recipe PT-5 T = 25

 $V_{pre} = 6.41$ $V_{post} = 7.28$

Total Plated = 17

Red Brown Layer?
Peel at @ Edges

Run # 11 wafer 07 200 Å seed on T.N

Recipe PT-7 T = 25

 $V_{pre} = 7.80$ $V_{post} = 9.68$

High Peeling

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Project: _____

Notebook Number: _____

Run # 4 wafer # 7 P Low lot of Pattern

Patterned 1000 Å seed Ta N Bump

2 Amps 25 °C

V_{pre}

$V_{plate} = 7.37$

Total = 2.97 A-min

Run # 5 wafer # 19

500 Å seed Ta Bump

$V_{pre} = 5.96 V$

593 A-min

$V_{plate} =$

Recipe Pt-5 Rest for

Run # 6

wafer 20

Ta Bump

600 Å seed

Pt-7

No peeling

Run # 7

wafer 16

Ta

200 Å seed

Pt-7

No peeling

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1-15-89
Evolutionary
GAS Analysis
method

6/10

Project: _____

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~~Run # 12 Wafer # 17 200i seed~~

<u>Run #</u>	<u>wafer #</u>	<u>Seed (A)</u>	<u>Basin</u>	<u>Repr</u>	<u>V_{acc}</u>	<u>V_{port}</u>	<u>Peeling</u>	<u>T</u>
2	17	200	Ta	Pt.5	8.35	8.61	Depth	25
3	18	200	Ta	Pt.7	5.74 8.31	6.83	Peeling	65
4	25	600	Ta N	Pt.5	4.18	4.62	" "	65
5	22	200	Ta N	Pt.7	5.54	6.84	" "	65
6	03	600	Ta N	Pt.7	4.26	5.25	Pt. 6m Pt. Peeling	"
17	23	200	Ta N	Pt.5	6.02	6.06		"
18	9	600	Ta N	Pt.5	4.09	4.57		
19	8	400	Ta N	Pt.7	4.55	5.55		

SEM Area 3mm x 1mm

5:30 PM Pump % @ 5 GPM = 60%

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Date _____

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Project:

M.1, P+

Notebook Number:

Added 3g Pt salt & 1.1 L of water

Ran 65°C all AM (No plating), cooled

Added = 1 L water @ Noon

Patterned water

Reaper

Ful I

Amp-min Total

PT7 PL Pulse 1 on 1 off

1 1.4 2.4

PT8 PL Pulse 1 on 1 off

0 2.4 2.4

PT7

1.0 4.97 5.97

PT5

1.0 4.97 5.97

PT7

1.0 1.4 2.4

PT3

0 2.4 2.4

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ect: _____

Not book Number: _____

601 # red Barriers Recipe Made 7 type Update

~~22~~ ~~600~~ ~~70~~ ~~PT 3 PL~~ ~~Pulse~~

9.0 Alant	600	T _a N	PT 7 PL	Also	25	
11	1000	T _a N	PT 3 PL	Pulse		1.64
15	1000	T _a	7	DC		
18	600	T _a N	3	↓		
20	1000	T _a N	7	↓		

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Pr

5

0

9/10

Project:

Mot. Pt

Notebook Number:

Visual Evaluation

Blanket markers

marker #

- 01 Hug Edge Peeling Peeling of ECD Pt film PUN Pt
- 02 " " " "
- 03 Peeling (Hug) of ECD Pt film PUN Pt
- 04 " " " "
- 05 Missing
- 06 Peeling around fingers, Underlying layer is silver & cracked (Is it Burner or PUN Pt)
Lo.Hg like Burner
Hug also peeling of Pt total film Burner
- 07 " " " "
- 08 Little to No edge or finger peeling
- 09 Hug Finger & edge peeling near 1 finger
Remainder NO edge or finger peeling
- 10 Hug edge & finger peeling, poor adherency
- 11 Little edge peeling near fingers only
- 12 Cracking peeling near every finger
No edge peeling
- 13 Localized edge peeling in 1 spot
- 14 Localized edge peeling near fingers
- 15 No peeling
- 16 Little to No peeling - P.I I plate on the edge?
- 17 & 18 " " " "

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Project: _____

Not book Number: _____

19 Little peel @ edge, More than 17 & 18

20 " "

21 Peel @ edge

22 " "

23 Hug peel @ edge

24 Peel @ edge

25 " "

Patterned Notes

23 Peel @ edge Localized

24 " " " "

29 No peeling

11 " "

14 Light edge peel

15 " "

16 " "

19 " "

20 " "

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Signature _____

Date _____

Date _____